What is claimed is:

1.　An image processing method comprising;

a first calculation step for calculating a characteristic quantity of an image,

a second calculation step for calculating a characteristic quantity of a plurality of material images, and

a selection step for selecting said material images according to the results of said first and second calculation steps;

wherein, in the case, for any of said plurality of material images, image data which represent the material image and have different image qualities are provided, a characteristic quantity of the image is calculated from image data which does not have the highest image quality among the image data which represent each of said plurality of material images and have different image qualities in said second calculation step.

2.　The method according to claim 1, wherein, in the case, images which represent said image and have different image qualities are provided, a characteristic quantity of an image is calculated from image data which does not have the highest image quality among the image data which represent a single image and have different image qualities in said first calculation step.

3.   The method according to claim 1, further comprising steps of dividing said image into a plurality of blocks and positioning said material images selected at said selection step to form a mosaic image,

5   wherein, a characteristic quantity of an image in each block is calculated in said first calculation step, and one material image is selected for said each block based on a similitude between the characteristic quantity of the image in said block and the characteristic quantity of each of

10   said plurality of material images in said selection step.

4.   The method according to claim 1, wherein, if image data of one image quality is provided for any of said image or said plurality of material images, a characteristic quantity is calculated from said image data in said first

15   or second calculation step.

5.   The method according to claim 1, wherein said image data of different image qualities which represent said image is image data of different resolutions.

6.   The method according to claim 1, wherein said image

20   data which represent said image and have different image qualities are image data of different gradation levels.

7.   The method according to claim 1, wherein said first and second calculation steps calculate the average density of each of a plurality of color components of the image.

8.   The method according to claim 7, wherein said plurality
of color components are three primary colors, R (red), G
(green), and B (blue).

9.   The method according to claim 3, wherein said
positioning step comprises a step of scaling up/down said
selected material images to the size of a block in which
the material image is placed.

10.   The method according to claim 3, wherein, if image data
which represent a material image selected for a block of
interest and have different resolutions are provided, image
data of a size which is substantially the same as the size
of the block of interest is selected from image data
corresponding to said material image to place in said
positioning step.

11.   An image processing method in a image processing system
comprising a image processing apparatus and a image storage
apparatus;

      holding first information including a characteristic
quantity of each of a plurality of material images by said
image processing apparatus, the first information
corresponds to each of said plurality of material images
and has an amount of information less than that of each of
said plurality of material images;

      determining a material image and its position
according to an original image and said first information
by said image processing apparatus;

storing said plurality of material images by said image
storage apparatus, and

outputting an material image out of said plurality of
material images stored in said storage apparatus according

5   to the position determined in said determining step.

12. The method according to claim 11, wherein said
determining step determines a material image corresponding
to each block created by dividing the original image for
positioning of the material image, said outputting step

10 forms a mosaic image by combining material images
corresponding to each block.

13. The method according to claim 11, wherein said first
information is a scale-down image of each of said plurality
of material images.

15 14. The method according to claim 11, wherein said first
information is a characteristic quantity of each of said
plurality of material images.

15. A image processing method for selecting a desired
material image from a plurality of material images stored

20 in a image storage apparatus according to a characteristic
of an original image comprising the steps of:

holding information including a characteristic of
each of said plurality of material images;

determining a material image according to the original

25 image and said information; and

outputting information indicating said determined material image to said image storage apparatus.

16. The method according to claim 15, wherein said output step combines selected material images to form a mosaic image.

17. The method according to claim 15, further comprising a step of receiving information including a characteristic of each of said plurality of material images from said image storage apparatus,

18. The method according to claim 15, wherein said plurality of material images are divided into a plurality of groups and held and said method further comprising a step of specifying any of said plurality of groups.

19. The method according to claim 15, further comprising a step of receiving the mosaic image formed in said image storage apparatus.

20. A image file managing method for storing image data as a image file; said method comprising the steps of:

dividing said image data into a plurality of segments and generating the image file comprising of a header part containing attribute information relating to image data of each segment and a data part in which actual data for a each of said segments can be contained; and

obtaining link target information indicating the filename of said another image file and the segment to be

used for a segment of said plurality of segments for which image data of a segment in another image file is used, and

generating the image file comprising a step of providing to a segment for which image data of a segment in said another image file is used attribute information indicating a link and storing the link target information obtained in said obtaining step as actual data of said segment.

21. The method according to claim 20, wherein said link target information indicates a image file on a local disk in the same apparatus.

22. The method according to claim 20, wherein said link target information indicates an image file on a network.

23. The method according to claim 20, wherein a compression format is provided as attribute information to a segment for which image data is stored in said actual data, and data indicating a link is provided as attribute information to a segment for which link target information is stored.

24. The method according to claim 20, further comprising,

a read step of analyzing the header part contained in a specified image file to read image data of each segment from the data part,

in said read step, for a segment to which attribute information indicating a link to another file is provided in said header part, referencing link target information

entered in said data part and accessing said another file to obtain required image data,

outputting the image data obtained in said step of obtaining the required image data.

25. The method according to claim 24, wherein said step of outputting outputs display data to a display apparatus.

26. The method according to claim 24, wherein said step of outputting outputs data to a printer.

27. A image managing method, comprising the steps of:

inserting an identifier in the replicated image when a replicated image is generated from an original image;

storing information indicating correlation between original image of the replicated image to which said identifier is added and said identifier; and

retrieving the original image corresponding to the identifier inserted in said replicated image upon receiving said replicated image.

28. The method according to claim 27, wherein said original image is of a multi-frame format and said replicated image is a replication of one frame of the multiple frames.

29. The method according to claim 27, wherein said original image contains multilevel image data and said replicated image is a replication of an image at one level.

30. The method according to claim 27, wherein each of said original image and replicated image contains time information indicating the time when each image is

generated, and the method further comprising a step of generating a new replicated image if said original image obtained based on the identifier inserted in said replicated image is newer than said replicated image,.

5   31. An image processing apparatus comprising:

first calculation means for calculating a characteristic quantity of an image;

second calculation means for calculating a characteristic quantity of a plurality of material images;

10   and

selection means for selecting said material images according to the results of said first and second calculation means,

wherein, if, for any of said plurality of material

15   images, image data which represent the material image and have different image qualities are provided, said second calculation means calculates a characteristic quantity of the image from image data which does not have the highest image quality among the image data which represent each of

20   said plurality of material images and have different image qualities.

32. The apparatus of claim 31, wherein, if, images which represent said image and have different image qualities are provided, said first calculation means calculates a

25   characteristic quantity of an image from image data which does not have the highest image quality among the image data

which represent a single image and have different image qualities.

33. The apparatus of claim 31, further comprising means for dividing said image into a plurality of blocks and positioning said material images selected by said selection means to form a mosaic image,

wherein, said first calculation means calculates a characteristic quantity of an image in each block,

said selection means selects one material image for said each block based on a similitude between the characteristic quantity of the image in said block and the characteristic quantity of each of said plurality of material images.

34. The apparatus of claim 31, wherein, if image data of one image quality is provided for any of said image or said plurality of material images, said first or second calculation means calculates a characteristic quantity from said image data.

35. The apparatus of claim 31, wherein said image data of different image qualities which represent said image is image data of different resolutions.

36. The apparatus of claim 31, wherein said image data which represent said image and have different image qualities are image data of different gradation levels.

37. The apparatus of claim 31, wherein said first and second calculation means calculate the average density of each of a plurality of color components of the image.

38. The apparatus of claim 37, wherein said plurality of
5 color components are three primary colors, R (red), G (green), and B (blue).

39. The apparatus of claim 33, wherein said positioning means comprises a means for scaling up/down said selected material images to the size of a block in which the material
10 image is placed.

40. The apparatus of claim 33, wherein, if image data which represent a material image selected for a block of interest and have different resolutions are provided, said positioning means selects image data of a size which is
15 substantially the same as the size of the block of interest from image data corresponding to said material image to place it in said block of interest.

41. An image processing apparatus for selecting a desired material image from a plurality of material images stored
20 in an image storage apparatus according to a characteristic of an original image, said apparatus comprising:

        means for holding information including a characteristic of each of said plurality of material images,

25   means for determining a material image according to the original image and said information, and

means for outputting information indicating said
determined material image to said image storage apparatus.

42. The apparatus of claim 41, wherein said output means
combines selected material images to form a mosaic image.

43. The apparatus of claim 41, further comprising a means
for receiving information including a characteristic of
each of said plurality of material images from said image
storage apparatus.

44. The apparatus of claim 41, wherein said plurality of
material images are divided into a plurality of groups and
held and said apparatus further comprising a means for
specifying any of said plurality of groups.

45. The apparatus of claim 41, further comprising a means
for receiving the mosaic image formed in said image storage
apparatus.

46. A image file managing apparatus for storing image data
as a image file, said apparatus comprising:

generation means for dividing said image data into a
plurality of segments and generating the image file
comprising of a header part containing attribute
information relating to image data of each segment and a
data part in which actual data for a each of said segments
can be contained; and

means for obtaining, for a segment of said plurality
of segments for which image data of a segment in another
image file is used, link target information indicating the

filename of said another image file and the segment to be used,

link information storage means for, in generating a image file by said generation means, providing to a segment for which image data of a segment in said another image file is used attribute information indicating a link and storing the link target information obtained in said obtaining means as actual data of said segment.

47. The apparatus of claim 46, wherein said link target information indicates an image file on a local disk in the same apparatus.

48. The apparatus of claim 46, wherein said link target information indicates an image file on a network.

49. The apparatus of claim 46, wherein a compression format is provided as attribute information to a segment for which image data is stored in said actual data, and data indicating a link is provided as attribute information to a segment for which link target information is stored.

50. The apparatus of claim 46, further comprising:

read means for reading image data of each segment from the data part by analyzing the header part contained in a specified image file;

means for referencing link target information entered in said data part and accessing another file to obtain required image data for a segment to which attribute

information indicating a link to said another file is provided in said header part; and

    means for outputting the image data obtained in said means for obtaining the required image data.

5   51. The apparatus of claim 50, wherein said means for outputting outputs display data to a display apparatus.

52. The apparatus of claim 50, wherein said means for outputting outputs data to a printer.

53. A image managing apparatus, comprising:

10   means for inserting an identifier in the replicated image when a replicated image is generated from an original image;

    means for storing information indicating correlation between original image of the replicated image to which said

15   identifier is added and said identifier; and

    means for retrieving the original image corresponding to the identifier inserted in said replicated image upon receiving said replicated image.

54. The apparatus of claim 53, wherein said original image

20   is of a multi-frame format and said replicated image is a replication of one frame of the multiple frames.

55. The apparatus of claim 53, wherein said original image contains multilevel image data and said replicated image is a replication of an image at one level.

25   56. The apparatus of claim 53, wherein each of said original image and replicated image contains time

information indicating the time when each image is
generated, said apparatus further comprising means for
means generating a new replicated image if said original
image obtained based on the identifier inserted in said
5   replicated image is newer than said replicated image.

57. An image processing system comprising an image
processing apparatus and an image storage apparatus; said
image processing apparatus comprising:

     means for holding first information including a
10 characteristic quantity of each of a plurality of material
images, the first information corresponds to each of said
plurality of material images and has an amount of
information less than that of each of said plurality of
material images; and

15   ·   means for determining a material image and its position
according to an original image and said first information;

     said image storage apparatus comprising,

     means for storing said plurality of material images,
and

20   means for outputting a material image out of said
plurality of material images stored in said storage
apparatus according to the position determined by said
determination means.

58. The system of claim 57, wherein said determination
25 means determines a material image corresponding to each
block created by dividing the original image for

positioning of the material image, said output means forms
a mosaic image by combining material images corresponding
to each block.

59.   The system of claim 57, wherein said first information
corresponding to said material images is a plurality of
scale-down image or a plurality of image characteristic
parameters corresponding to said plurality of material
image.

60.   The system of claim 57, wherein said image processing
apparatus further comprising receiving means for receiving
the first information corresponding to said plurality of
material images from said image storage apparatus.

61.   The system of claim 57, wherein said receiving means
receives the first information corresponding to said
material images during activation of said image processing
system.

62.   The system of claim 58, wherein said storage means
stores said plurality of material images by dividing said
plurality of material images into a plurality of groups,
and said determination means determines a material image
and its position according to the first information
corresponding to a plurality of material images contained
in a selected group.

63.   The system of claim 58, wherein said receiving means
further receives a mosaic image generated by said output
means.

64. The system of claim 58, wherein said image processing apparatus receives the material image determined by said determination means from said image storage means by said receiving means and positions the material image received by said receiving means according to the position determined by said determination means to form a mosaic image.

65. The system of claim 57, wherein a plurality of said image processing means are provided and said image storage means can be shared between said plurality of image processing means.

66. A computer-readable storage medium containing a program for implementing the method set forth in claim 1 by a computer.

67. A computer-readable storage medium containing a program for implementing the method set forth in claim 11 by a computer.

68. A computer-readable storage medium containing a program for implementing the method set forth in claim 15 by a computer.

69. A computer-readable storage medium containing a program for implementing the method set forth in claim 20 by a computer.

70. A computer-readable storage medium containing a program for implementing the method set forth in claim 27 by a computer.

71. An image processing apparatus which constructs an image processing system together with an image selection apparatus connected via a network, for selecting a desired material image from a plurality of material images,

5   comprising hold means for holding the material images.

72. The image processing apparatus according to claim 71, wherein said image processing apparatus generates a mosaic image by combining the selected material image.

73. An image selection apparatus which constructs an image

10 processing system together with an image processing apparatus connected via a network, for selecting a desired material image from a plurality of material images, comprising:

    selection means for selecting the desired material

15 image; and

    output means for outputting data indicative of the selected material image to the image processing apparatus.

74. The method according to claim 7, wherein said plurality of color components are Y, U and V.

20 75. The method according to claim 7, wherein said plurality of color components are C, M, Y and K.

76. The method according to claim 7, wherein said plurality of color components are L, a and b.